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SessionⅢ: Developing Regional Bond Markets in East Asia: Issues and Proposals

Road Map for Building the Institutional Foundation for Regional Bond Market in East Asia

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Road Map for Building the Institutional Foundation for Regional Bond Market in East Asia:

Credit Insurers, ABS Corporations and Asian Bond Funds

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Abstract

Over the past several years, Asian governments have made remarkable improvements in government bond issuances. However, there is very little progress of disintemediation in the region. It is because corporate bonds remain underdeveloped in Asia. The key issue of Asian corporate bond market is its lack of credit ratings at investment grade. Without the status of investment grade, Asian corporate bond cannot easily gain access to international and domestic institutional investors and the corporate bonds cannot grow easily. Three key institutional foundations are crucial to accelerate the growth of the Asian corporate bonds, namely credit insurance, securitization and Asian bond funds. The first two foundations can transform Asian corporate bonds to be investment-grade assets and the last one can enlarge the investor base of the corporate bonds. Top-rated insurers can transform Asian corporate bonds to be investment-grade assets. To attract their presence in Asia, Asian governments should grow regional and domestic credit insurers. These credit insurers will nurture the development of a reinsurance market and enable the growth of credit derivatives and insurance-linked securities. With more tools to hedge effectively credit risk in Asia, international investors, top-rated credit insurers and top-rated financial institutions will find it safer to take their stakes in the Asian credit market. Asset securitization is another way to transform Asian corporate bonds to be investment-grade assets. ABS Corporations should be established to facilitate asset securitization. These ABS Corporations can standardize the contracts or procedures for acquiring assets into asset pools, for soliciting credit insurance contracts and for distributing ABS. Investor base is an important concern of the development of Asian corporate bond market. An Asian bond fund, supported purely by Asian governments, will no doubt strengthen the demand for Asian corporate bonds. But it will not widen investor base in the long run. A desirable strategy is to securitize the government-based bond fund to be a mutual fund sold to individual and institutional investors. The fund primarily invests in insured debt securities and its investors will thus bear very little credit risk.

In the era of globalization, an Asian bond market needs to suit the needs of international and domestic investors. All these investors are rational and are able to make global comparisons in their investment. Asian governments need to ensure the supply of investment-grade assets if they want to grow their bond markets. Credit enhancement is an immediate and effective solution for this goal.

1. Introduction

Asian governments have made their efforts in developing domestic bond markets for the past several years. They issue government securities, motivate financial institutions to invest in marketable debt securities, undergo legal reforms for debt securities issuances, build infrastructure for bond trading and clearing, and establish credit guarantee mechanisms. All these measures aim to achieve financial disintermediation in their economies and to diversify the sources of funding for their public and private sectors. There are many arguments on the causes of Asian financial crisis. One fatal cause is the collective withdrawal of global banks from their lending activities in Asian region. This leads to insolvency of some Asian financial and nonfinancial institutions, jeopardizing the regional banking and economic systems. In order to build less vulnerable financial systems for Asian developing economies, International Monetary Fund, World Bank and Asian Development Bank actively promote the establishment domestic bond markets[1]. A domestic bond market can increase efficiency of allocation of surplus funds, retain domestic capitals, diversify funding sources for corporations, and give governments more channels to stabilize their financial markets.

The efforts of Asian governments, especial those East Asian countries, in developing bond market is evidenced by the growing size of their debt securities issuances. Table 1.1 displays the size of both total financing and bond issuance in selected East Asian economies. China, Hong Kong SAR, South Korea, Singapore and Chinese Taipei have made remarkable increase in bond issuances. The total amount of their bond issuances in 2001 nearly doubles that in 1998. Due to the global concern on terrorism

[1] IMF and World Bank co-published a handbook on developing government bonds (see World Bank/IMF). Also, Asian Development Bank offered training program for central bankers on developing domestic bond market in APEC member countries (see ADB 1999).

and economic downturns in 2001, bond issuances dropped in that year. International and domestic capitals shifted to less risky assets, such as OECD government bonds and triple-A bonds. In 2002 bond issuances in East Asia recovered and reached a size close to the size in 1998.

Table 1.1
Bond Issuance and Total Financing in Selected East Asian Economies

Total Emerging Market Financing in East Asia

	1998	**1999**	**2000**	**2001**	**2002**
China	6,975.1	3,461.8	23,063.4	5,567.3	6,101.0
Hong Kong SAR	2,093.2	11,488.3	21,046.4	18,307.3	7,014.7
Indonesia	374.2	1,465.3	1,283.1	964.9	756.0
S. Korea	6,259.9	13,542.3	14,230.4	17,021.0	14,546.3
Malaysia	2,527.2	5,177.2	4,506.4	4,432.4	5,108.9
Philippines	4,113.0	7,181.7	5,021.9	3,658.8	5,797.3
Singapore	2,466.5	4,338.7	6,079.7	10,383.6	2,951.6
Chinese Taipei	2,439.1	4,019.9	6,703.5	3,794.0	9,279.0
Thailand	5,047.1	2,551.7	1,572.5	684.4	1,003.1
Total	32,295.3	53,226.9	83,507.3	64,813.7	52,557.9

NB: Total financing includes loan syndications, bond issuances and equity issuances.

Total Bond Issuance

	1998	**1999**	**2000**	**2001**	**2002**
China	1,794.0	1,060.0	1,770.7	2,341.9	602.8
Hong Kong SAR	725.4	7,124.8	7,058.9	10,458.6	1,951.6
Indonesia	0.0	0.0	0.0	125.0	375.0
S. Korea	5,084.4	4,905.8	7,653.0	7,756.3	6,705.5
Malaysia		2,062.4	1,419.7	2,150.0	1,880.0
Philippines	1,890.0	4,751.2	2,467.3	1,842.4	4,773.8
Singapore	1,500.0	2,147.2	2,338.8	8,664.7	560.5
Chinese Taipei	1,041.0	475.0	1,698.0	2,152.4	5,450.8
Thailand	300.0	794.4	0.0	278.6	48.0
Total	12,334.8	23,320.8	24,406.4	35,769.9	22,348.0
Bond Issuance /Total Financing	38.19%	43.81%	29.23%	55.19%	42.52%

Source: Global Financial Stability Report (March 2003). International Monetary Fund

Table 1.2: Size of Selected Capital Markets 2001

	US$ bln				% of the GDP				% of Capital Market			
	EU-15	**USA**	**Japan**	**Asian Emerging Market**	**EU-15**	**USA**	**Japan**	**Asian Emerging Market**	**EU-15**	**USA**	**Japan**	**Asian Emerging Market**
GDP	7906.9	10082.2	4169.9	3229.7					15.34%	18.50%	7.65%	34.72%
Stock Mkt Cap	6763.0	13826.6	2293.8	1310.4	85.53%	137.14%	22.75%	40.57%	13.12%	25.38%	4.21%	14.09%
Debt Securities												
Public	4868.8	9698.0	5317.1	674.1	61.58%	96.19%	52.74%	20.87%	9.45%	17.80%	9.76%	7.25%
Private	6974.6	8806.3	1608.0	595.9	88.21%	87.35%	15.95%	18.45%	13.53%	16.16%	2.95%	6.41%
Total	11843.4	18504.3	6925.1	1270.0	149.79%	183.53%	68.69%	39.32%	22.98%	33.96%	12.71%	13.65%
Bank Assets	32939.7	22157.4	12408.6	6722.4	416.59%	219.77%	123.07%	208.14%	63.90%	40.66%	22.77%	72.26%
Capital Market [a]	51546.1	54488.3	21627.5	9302.8	651.91%	540.44%	214.51%	288.04%				

Source: Global Financial Stability Report (March 2003, p.121). International Monetary Fund

[a] *Capital market is the sum of stocks, debt securities and bank assets.*

Is the size of Asian bonds sufficient? Does it have more room to grow? These can be answered by the comparison among USA, EU (15 countries), Japan and Asian emerging markets. Table 1.2 exhibits the size of debt securities in 2001 and their size relative to GDP and total capital market of the above four regions. The size of Asian debt securities, including those in Japan, exceeds US$8,200 bln. It is 30% less than EU and 50% less than USA. In terms of size of debt securities relative to GDP, Japan is around 69%, Asian emerging market is 39%, EU is 150% and USA is 184% respectively. Obviously Asian bonds have much room to grow. In particular, the size of private-sector debt securities in Asia deserves our attention. In terms of size of private-sector debt securities relative to GDP, Japan is around 16% and Asian emerging Asian market economies are around 19%. These ratios are far below what EU and USA have (both are around 87%). In addition, many of these debt securities from the private sector are debt instruments issued by financial institutions. Very few domestic corporations are able to issue debt securities in Asia.

In addition to bond issuance, many efforts have been made on promoting the secondary market for Asian bonds. For instance, Japan proposed to build a regional bond market in Tokyo in March 2003. Hong Kong has set up in late 2002 a Central Moneymarkets Unit (CMU) to deal with clearing, settlement and custodian services associated with trading of domestic and international bonds. A number of stock exchanges have allowed the listing of debt securities. Some investment banks have jointly developed electronic platforms for Asian bond trading. Do these activities reflect an active Asia bond market? Does it mean an active bond market in Asia?

Table 1.3 displays a list of debt securities handled by CMU in Hong Kong. These securities are denominated in EUR, USD, CAD, GBP, AUD or HKD. The list shows a very small number of debt securities issued by Asia-based corporations. Many of the debt securities are issued by global banks and multinational corporations. Table 1.4 displays the fixed-income securities issued by Asian institutions. The list is provided by HSBC, an active bond dealer in Asia. These securities represent the securities that have been issued and actively traded in the secondary markets. Obviously most of the bond issuers are governments and government-based corporations. Very few private corporations are present in the list. This all indicates that disintermediation in Asia, especially in emerging Asian economies, makes very little progress. Corporations cannot easily raise funds directly from the lenders. They must rely on bank loans to support their business. The bank loans are mostly short-term or payable on demand. In the case of any slight economic instability, banks may collectively tighten their credits and these corporations may immediately become insolvent. Another financial crisis will thus happen.

Table 1.3 Issuers of the Debt Securities Handled by CMU in Hong Kong

ABBEY NATIONAL TREASURY SERVICES PLC
ABN AMRO BANK N.V.
AGRICULTURAL BANK OF CHINA
AIG FINANCE (HONG KONG) LIMITED
AIRPORT AUTHORITY HONG KONG
AMOY INTERNATIONAL TREASURY LTD.
ASIA COMMERCIAL BANK LIMITED
BANCA INTESA S.P.A.,HONG KONG BRANCH
BANCA NAZIONALE DEL LAVORO S.P.A.
BANK AUSTRIA AKTIENGESELLSCHAFT
BANK OF EAST ASIA, LIMITED (THE)
BANK OF NOVA SCOTIA (THE)
BANK OF TOKYO-MITSUBISHI, LTD.(THE)
BARCLAYS BANK PLC
BAUHINIA MBS LIMITED
BAYERISCHE HYPO-UND VEREINSBANK AG
BAYERISCHE LANDESBANK
BNP PARIBAS,HONG KONG
CHEKIANG FIRST BANK LTD
CHEUNG KONG FINANCE CAYMAN LTD
CHINA CONSTRUCTION BANK
CITIBANK N.A.
CITIC HONG KONG FINANCE LTD.
CITIC KA WAH BANK LIMITED
COMMERZBANK AG
COMMERZBANK AKTIENGESELLSCHAFT, FRANKFURT
COMMONWEALTH BANK OF AUSTRALIA
COOPERATIEVE CENTRALE RAIFFEISEN-BOERENLEENBANK BA
CREDIT AGRICOLE INDOSUEZ
CREDIT LYONNAIS
CREDIT LYONNAIS FRANCE
DAH SING BANK LIMITED
DAO HENG BANK LIMITED
DBS KWONG ON BANK LIMITED
DEUTSCHE BANK AG, LONDON
DEUTSCHE BANK AKTIENGESELLSCHAFT
DEVELOPMENT BANK OF SINGAPORE LTD. (THE)
DRESDNER BANK AG
EUROPEAN INVESTMENT BANK
FAST LANE INVESTMENTS LTD.
FORTIS BANK
FORTIS BANK ASIA HK
GE CAPITAL (HONG KONG) LIMITED
HANG SENG BANK LTD
HD FINANCE (BVI) LTD
HKMC FUNDING CORPORATION (1) LTD.
HONG KONG ELECTRIC (CAYMAN) LTD
HONGKONG & SHANGHAI BANKING CORPORATION LTD.
HONGKONG ELECTRIC FINANCE (CAYMAN) LTD.
HUTCHISON WHAMPOA HONGVILLE FINANCE LTD.
INCHROY CREDIT CORPORATION LTD.
INDUSTRIAL & COMMERCIAL BANK OF CHINA (ASIA) LTD
INTERNATIONAL BANK OF ASIA LTD
INT'L BANK FOR RECONSTRUCTION & DEVELOPMENT
JIAN SING BANK LIMITED
JPMORGAN CHASE BANK
KOOKMIN BANK
LUNG KEE INVESTMENTS LIMITED
MALAYAN BANKING BERHAD (TDG AS MAYBANK)
MIZUHO CORPORATE BANK, LTD., HK BRANCH
MTR CORPORATION (C.I.) LTD.
NEDBANK LIMITED
NORDIC INVESTMENT BANK
PUBLIC BANK BERHAD,KUALA LUMPUR
SHANGHAI COMMERCIAL BANK LTD.
STANDARD BANK ASIA LIMITED
STANDARD CHARTERED BANK
SUMITOMO MITSUI BANKING CORPORATION
SUN HUNG KAI PROPERTIES (CAPITAL MARKET) LTD.
SWIRE PACIFIC HOLDINGS INC
SWIRE PACIFIC MTN FINANCING LIMITED
THE HONG KONG MORTGAGE CORPORATION LIMITED
UBS AG, HONG KONG
UFJ BANK LIMITED, HONG KONG BRANCH
WESTPAC BANKING CORPORATION
WHARF FINANCE (BVI) LIMITED
WING HANG BANK LTD.
WING LUNG BANK LIMITED

Source: Hong Kong Monetary Authority (April 2003)

Table 1.4 Asian Fixed-Income Securities

Region	Issuer	Coupon	Freq	Maturity	Mid price (US$)	Mid Spread to UST
China/HK	People R. of China	7.750	2	7/5/2006	115.580	2.494
	People R. of China	7.300	2	12/15/2008	121.830	2.997
	People R. of China	6.800	1	5/23/2011	121.270	3.644
	China Telecom HK	7.875	2	11/2/2004	108.030	2.120
	China Intl Tr & Inv	9.000	2	10/15/2006	117.830	3.369
	Citic Pac Fin (2001)	7.625	2	6/1/2011	113.520	5.513
	CLP Power	7.500	2	4/15/2006	113.510	2.594
	HK Land Fin	7.000	2	5/3/2011	114.800	4.738
	Kln-canton Rail	7.250	2	7/27/2009	122.190	3.247
	Kln-canton Rail	8.000	2	3/15/2010	127.080	3.488
	Hut. Wham Fin	6.950	2	8/1/2007	113.810	3.372
	MTR Limited	7.250	2	10/1/2005	111.460	2.195
	MTR Limited	7.500	2	2/4/2009	121.900	3.247
	MTR Limited	7.500	2	11/8/2010	125.350	3.588
	Swire Pacifc	8.500	2	9/29/2004	108.200	2.220
	Wharf Capital Intl	8.875	2	11/1/2004	109.340	2.170
	Wharf Capital Intl	7.625	2	3/13/2007	115.190	3.322
Indonesia	Rep. of Indo.	7.750	2	8/1/2006	107.250	5.237
	Bk Negara Indo.	7.625	2	2/15/2007	106.140	5.761
Korea	Rep. of Korea	8.875	2	4/17/2008	125.190	3.197
	Exp-imp Bk Kor	6.375	2	2/15/2006	109.070	2.870
	Korea Dev Bk	7.375	2	9/17/2004	106.800	2.045
	Korea Dev Bk	7.250	2	5/15/2006	112.270	2.895

	Pohang I&S	7.125	2	11/1/2006	112.470	3.244
Philippine	Rep of Philippines	8.875	2	4/15/2008	109.170	6.526
	Rep of Philippines	9.875	2	3/16/2010	113.850	7.166
	Rep of Philippines	10.625	2	3/16/2025	114.380	9.047
	AC Intl Fin	8.750	2	1/15/2005	104.650	8.169
	Bangko Sen Ng Phil	8.500	2	8/11/2004	106.730	2.752
	Phil Long Dist Tel	10.625	2	6/2/2004	104.650	5.809
Thailand	Kingdom of Thai	7.750	2	4/15/2007	117.880	2.846
	Ind Fin Corp-thai	7.375	2	1/14/2007	113.830	3.296
	Bangkok Bk (sub)	8.750	2	3/15/2007	118.180	3.580
Malaysia	Govt of Malaysia	8.875	2	6/1/2009	128.110	3.517
	Malayan Bk (sub)	7.125	2	9/15/2005	109.490	2.820
	Petroliam Nas	8.875	2	8/1/2004	108.080	1.870
	Petroliam Nas	7.125	2	10/18/2006	113.790	2.825
	Petroliam Nas	7.625	2	10/15/2026	115.690	6.329
	Tenaga Nas	7.625	2	4/29/2007	114.590	3.597
	Tenaga Nas	7.500	2	11/1/2025	109.472	6.679
	Tenaga Nas	7.625	2	4/1/2011	117.990	4.838
		Coupon	**Freq**	**Maturity**	**Mid price (US$)**	**Mid Spread to UST**
	Maxium	10.625	2	10/15/2026	128.110	9.047
	Median	7.625	2	3/13/2007	113.810	3.322
	Minimum	6.375	1	6/2/2004	104.650	1.870

Source: HSBC Markets (Reported on South China Morning Post on May 27, 2003)

2. Recent Proposals on Bond Market Development

In February of 2003, China, Japan, South Korea and the ten member countries of the Association of Southeast Asian Nations (denoted by Asean+3 Consortium thereafter) agreed to develop an Asian regional bond market based in Tokyo (ASWJ Mar 3, 2003). The market aims to prevent the reoccurrence of another currency crisis and to stop surplus savings of Asian people flowing out of Asia. The Asean+3 Consortium have discussed a number of initiatives about bond market development:

1. Active issuance of sovereign bonds by Asian governments
2. Allowance of cross-border enterprises to issue domestic bonds to finance their foreign direct investments.
3. Active development of the market for asset-backed securities.
4. Issuance of bonds denominated in local currency, foreign currencies and currency baskets.
5. Effective use of credit guarantees (such as Asian Regional Guarantees Facilities)
6. Developing the bond market infrastructure (accounting standards, disclosure rules, settlement systems, rating agencies, and rules and regulations concerning transactions)

The above suggestions from the Asean+3 Consortium lay out the framework for further cooperative efforts to be done by East Asian governments. However, we need to ask an important question: Can a regional bond market established in Japan, Singapore or Hong Kong really accelerate the growth of Asian corporate bonds?

A bond market serves mainly the functions of originating, underwriting, listing, trading and settlements of debt securities. The first four functions can be easily done through electronic devices today. Many financial instruments, such as equities, bonds and derivatives, can be structured, underwritten and traded in the OTC market. They do not necessarily need a physical marketplace. The last function, the function of settlement, may need to be done in a market that allows free capital flows. In Asia, Japan, Singapore and Hong Kong can be good locations for bond settlement because of their free flow of international capitals[2].

The success of a financial market is not the physical marketplace. History tells us that many financial instruments fail to grow because of insufficient demand. If we want to see the growth of corporate bonds, we must supply corporate bonds that investors like to invest. Even though Asia provides infrastructure for bond trading and settlement, it may not help the growth of Asian corporate bonds if they are not of acceptable good quality. We need to enhance the quality of the corporate bonds and make them appealing to international and domestic investors. Recent meetings of APEC leaders have identified two mechanisms to achieve the job, namely credit guarantee and securitization. Both of them can improve the quality of Asian debt securities. This paper will extend this discussion and suggest some institutional foundations for the emergence and growth of the two mechanisms. Also, it will discuss the demand side of Asian corporate bonds and recommend the establishment of securitized Asian bond funds.

[2] The trading of American Depository Receipts (ADRs) is settled via investment banks of the US. This means it may not be necessary to have a centralized system for custodian and clearing of Asian bonds.

3. Credit Quality of Asian Corporate Bonds

Many argue that the slow growth of Asian corporate bond market is due to the lack of credit ratings on Asian bonds because international rating agencies are reluctant to analyze the creditworthiness of Asian corporations. Lack of information and insufficient demand for the information of credit ratings may explain why the international rating agencies are inactive in Asia. Some argue that there should be more Asia-based rating agencies to provide credit ratings on Asia corporations. However, it may take years for these rating agencies to gain their global recognition.

Imagine that we have many creditworthy and independent credit rating agencies present in Asia. They actively do credit ratings on Asian debt securities. Does it result in fast growth in the bond market? The answer is negative. High yield bonds, previously known junk bonds, have been in the market since the early 1980s. It grows very fast in the past 20 years. However, in terms of size, high yield bonds account for only small percent of all debt securities issued. High yield bonds represent those bonds with credit ratings at speculative grades. They include emerging sovereign debts. In the bond market, investors are mainly institutional investors, such as governments, central banks, supranational organizations, pension funds, mutual funds, multinational corporations, insurance companies and banking institutions. These investors look for stable returns and have strong preferences on investment-grade debt securities. Table 3.1 summarizes the credit ratings associated with investment grade and speculative grade. The bottom line of investment grade is Baa (Moody's system) or BBB (S&P system). The Eurobond market mainly deals with assets of investment grade. The MTN (medium-term note) market also deals with corporations or banks granted credit ratings or financial strength ratings at investment grade. Many interbank transactions mainly involve investment-grade assets. Investment grade is like a permit to gain access to a large pool of international investors.

Table 3.1 Bond Credit Quality Ratings				
	Ratings Agency			
Categories	**Moody's**	**S&Ps**	**Fitch IBCA**	**Duff & Phelps**
Investment Grade				
Highest quality	Aaa	AAA	AAA	AAA
High quality	Aa	AA	AA	AA
Upper medium grade	A	A	A	A
Medium grade	Baa	BBB	BBB	BBB
Speculative Grade				
Lower medium grade	Ba	BB	BB	BB
Low grade	B	B	B	B
Poor quality	Caa	CCC	CCC	CCC
Most Speculative	Ca	CC	CC	CC
No interest paid or bankruptcy petition filed	C	D	C	C
In default	C	D	D	D

It is a reality that many Asian corporations find it hard to gain credit ratings at investment grade. Table 3.2 displays the credit ratings given by Moody's on emerging sovereign debts in Asia. At the top, we find Singapore, Chinese Taipei and Japan sharing the double-A rating or above. Hong Kong, Macau, China and Korea have only single-A rating. Others have B-related ratings. The ratings on sovereign debts represent the lowest credit risk of the countries concerned. If a country has its sovereign debt at the bottom of investment grade, its domestic corporations will be very hard to gain the investment-grade status. The bonds issued by the corporations need to be sold at the high-yield bond market in which the demand will be limited.

Investors in the high yield bond market have a different risk preference. They look for high returns to compensate their high risks undertaken. High yield bonds in the USA can give investors returns from both bond yields and from drastic surge of bond prices caused by mergers and acquisitions. When Asian corporate bonds are compared with high-yield bonds in the USA, Asian corporate bonds may not look more attractive to investors. Also, the US high yield bond market provides better information about corporate governance, better liquidity in the secondary market, more historical data for credit analysis and more clear legal protection for investors in case of insolvency. In short, to accelerate the growth of Asian corporate bonds, Asian governments need to transform these assets to be investment-grade assets.

Table 3.2
Moody's Ratings on Asian Soveriegn Bonds (April 2003)

	Government Bonds		
Economy	**Foreign**	**Domestic**	**Risk Category**
Singapore	Aaa[5]	—	Investment Grade
Chinese Taipei	Aa3[5]	A3	
Japan	Aa1	Aa3[5]	
Hong Kong	A3[5]	A3[5]	
Macau	A3[5]	A2	
China	A3	Aa3	
Korea	A3	Aaa	
Thailand	Baa3	Baa1	
Malaysia	Baa1	A3	
Philippines	Ba1	Baa3	Not Investment Grade
Indonesia	B3[5]	B3	
Vietnam	B1[5]	—	

Let us turn to the supply side of a bond market. Imagine that many less risk-averse investors are pleased to invest in Asian corporate bonds. Does it result in fast growth of Asian corporate bonds? The answer can be negative. Table 3.3 exhibits the yield spreads of emerging sovereign bonds, high yield bonds in the US and investment-grade bonds. The yield spreads represent the borrowing costs of bond issuers. EMBI+ is an emerging market bond index developed by J P Morgan, measuring the borrowing costs of developing countries mostly in the Latin American region. The EMBI+ stays at around 7.5% in recent years. The Merrill Lynch US High Yield index measures the yield spreads of US high yield bonds. It stays at around

8.0% in recent years. Both emerging market debts and high yield bonds are bonds at speculative grade. If an Asian corporation issues bonds, its funding cost will be as high as 12% (US T-bond yield [4%] plus yield spread [8%]). Some Asian corporations of less favorable credit ratings may need to pay a yield of higher than 18%. Will the Asian corporation make profit with such high funding costs? Many Asian corporations are able to acquire bank loans at an interest charge of 5% - 10%. Banks offer them low interest rates because of collateral pledged with the loans. Poor credit ratings do not motivate Asian corporations to issue unsecured bonds.

Overall speaking, the availability of credit ratings does not necessarily enable the growth of Asian corporate bonds. It is because it does not increase both demand and supply of Asian corporate bonds. Ideally there should be Asia-based rating agencies. But they cannot solve the immediate problem of Asian bond market. More importantly it will take a long time to build up their brand names and reputations. Given the dominance of international rating agencies, to flight another battle between the regional and international rating agencies would prolong the time horizon to such a point that is totally not viable to the Asian bond market.

Table 3.3 Yield Spreads of Emerging Sovereign Bonds and Other Bonds

	2000	2001	2002
EMBI+ (Spread in basis points)	756	731	765
Merrill Lynch US High Yield (Spread in basis points)	871	734	802
Salomon Broad Investment Grade (Spread in basis point)	89	78	62
US 10-yr treasury yield (yield in %)	5.12%	5.07%	3.83%

Source: Global Financial Stability Report (Marc 2003). International Monetary Fund.
Note: EMBI+, developed by J P Morgan, reflects the yields the external debts of developing countries, mainly Latin American markets.

One immediate solution to grow Asian corporate bonds is credit enhancement. It aims to transform Asian corporate bonds to be investment-grade assets to suit the appetite of both international and domestic institutional investors. Recent practices of credit enhancements mostly fall into categories discussed in the following sections.

4. Credit Insurance and Credit Insurers

Credit insurance (or credit guarantee) can take the forms of bond insurance, letter of credit, corporate guarantee and government guarantee. Bond insurance is widely used in the US municipal bond market. Municipal bonds are debt instruments issued by state, provincial and city governments. More than 50,000 state and local government units in the USA issue securities to raise funds for their infrastructure projects, schools, hospitals and other public purposes. Municipal bonds are subject to many risks, such as earthquakes, floods, tornadoes, environmental hazards, and other natural disasters. To make municipal bonds attractive to risk-averse bond investors, their interest payments and principle repayments are usually guaranteed by AAA-rated insurers. When an insured bond defaults, the insurer will immediately make the scheduled payments to the bond investors. In the USA, some insurance companies are deliberately established to serve as financial guarantors and credit insurers. They primarily insure municipal bonds and other debt obligations (see Table 4.1). Many of them are active in reinsurance market, swapping their credit insurance risks and sharing others' credit risks. These monoliners are regularly rated by credit ratings agencies that tend to evaluate their asset concentration, risk management system, management quality and financial strengths. In recent years, some multiline insurance companies, which are insurance companies having various business lines, also compete in the market of credit insurance. This helps diversify their business and insurance risks. Some Asia-based insurance companies also participate in the business of credit insurance.

Table 4.1 Financial Guarantor and Reinsurer in the US

Financial Guarantor or Reinsurer	Fitch's Financial Strength Ratings
ACA Financial Guaranty Corp.	A
ACE Capital Mortgage Reinsurance Co.	AA
ACE Capital Re International Ltd.	AA
ACE Capital Re Overseas, Ltd.	AA
ACE Capital Title Reinsurance Co.	AA
AXA Re Finance S.A.	BBB
Ambac Assurance Corp.	AAA
Asian Securitization & Infrastructure Assurance Ltd.	BBB
CDC IXIS Financial Guaranty (CIFG)	AAA
CDC IXIS Financial Guaranty Europe (CIFG Europe)	AAA
CDC IXIS Financial Guaranty North America, Inc.	AAA
Capital Guaranty Insurance Company	AAA
Capital Markets Assurance Corp. (CapMAC)	AAA
Commercial Guaranty Assurance Ltd. (CGA)	AA
Connie Lee Insurance Co.	AAA
Financial Guaranty Insurance Co.	AAA
Financial Security Assurance International Ltd.	AAA
Financial Security Assurance UK Ltd	AAA
Financial Security Assurance, Inc.	AAA
MBIA Assurance SA	AAA
MBIA Insurance Corp.	AAA
MBIA Insurance Corp. of Illinois	AAA
Radian Asset Assurance Inc.	AA
Radian Reinsurance Inc.	AA
XL Capital Assurance (U.K.) Ltd.	AAA
XL Capital Assurance Inc. (XLCA)	AAA
XL Financial Assurance Ltd. (XLFA)	AAA

Source: Fitch ICBA (April 2003)

Letter of credit is a traditional form of credit insurance. It is also known as bank guarantee. Many top-rated banks guarantee their corporate clients in their issuance of MTNs and bonds. In the past, banks benefited from offering guarantee instead of loans to their clients. Because it made credit risk off their balance sheet and reduced capital charges. Such an advantage disappears now because current bank regulations have included bank guarantees in the calculation of capital charges. In addition to banks, well-rated corporations and governments can offer credit insurance or credit guarantee to a bond issuer.

Credit insurance offers an efficient way to enhance credit quality of Asian corporate bonds. Although insurers will bear the credit risk, they are able to reduce their risk by overcollateralization, diversification, reinsurance, securitization [3] and other techniques[4]. Insurance premiums they charge highly depend on how much credit risk the insurers finally undertake. A top-rated bank can guarantee an Asian corporate bond by requesting collateral from the bond issuer for the guarantee provided. This makes the credit guarantee similar to a mortgage loan. In this arrangement, investors will enjoy a yield close to a bond issued by the bank. The bond issuer will pay a yield cost to what it pays for a mortgage loan. However, insured bonds provide additional benefits. First, bond issuers can raise funds directly from the capital market in which more lenders and investors are present. This may lower the funding costs of the issuers. Second, the issuers can gradually build their reputation in the capital market that may result in their lower borrowing cost in the long run. Third, the insured bonds are marketable that it may reduce borrowing costs of the issuers because of less liquidity risk undertaken by investors. Fourth, the insured bonds facilitate the development of a market with investment-grade assets. Fifth, a bank that has too

[3] Many insurance contracts are securitized to become insurance-linked securities. Through this mechanism, insurance companies can offload their insurance risks. Those investing in the insurance-linked securities take the insurance risk. If no contingent claims occur, the investors will earn high yields. Details about insurance securitization can be found in Border and Sarkar (1997), Canter, Cole and Sandor (1997) and Latza (1997).

[4] An insurer can hedge the country risk of its pool of credit insurance. Sharp rises in credit defaults in a country are generally linked with sharp falls in equity index and in exchange rates. The insurer can buy put option on equity index or exchange rate of a country to reduce the country risk involved. On the other hand, if the insurer wants to hedge the credit risk on a corporate bond, it can buy put options on the equity of the corporation that issues the bond. Alternatively, it can issue equity-linked securities to hedge its credit risk. In Hong Kong, equity-linked notes (ELNs) are very popular among both institutional and individual investors in 2000-2003. This indicates a good demand for the ELNs because the ELNs offer high yields to investors.

much credit risk with a single borrower may transfer its credit risk to credit insurers. It can obtain some commission by selling the credit business to the insurers. Such a mechanism enables banks to diversify their risk and rebalance their credit portfolios easily.

<u>International, Regional and Domestic Credit Insurers</u>

To transform Asian corporate bonds to be investment-grade assets, we need top-rated credit insurers and banks present in the Asian credit insurance market. In many cases, top-rated insurers do not offer credit insurance to bond issuers and debt obligators of very poor and no credit ratings. In this case, governments, domestic banks or domestic credit insurers in Asia may offer partial or full guarantees on the issuer[5]. This facilitates the Asian issuers to be insured by top-rated insurers. The insurance premium involved will be shared by domestic insurers and top-rated insurers. Domestic credit insurers can be government-sponsored institutions. For instance, many countries have export insurance corporations and deposit insurance corporations established. These insurers are mostly government-sponsored institutions but they operate on self-financing basis.

Meanwhile, Asian governments can facilitate the emergence of Asia-based credit insurers. In 1995, Asian Development Bank established the first regional bond insurance company in Singapore, known as Asian Securitization and Infrastructure Assurance Ltd (ASIA Ltd). The ownership of this company came from financial institutions, ADB's member countries, insurance companies and others. At its early stage, a US monoliner, Capital Markets Assurance Corporation, subscribed 30% of its

[5] Some governments in Asia provide guarantee schemes to support the financing of business firms. For instance, Korea sets up a fund to guarantee the issuance of asset-backed securities; and Hong Kong offers partial guarantees to SMEs for their acquiring loans from banks.

capital. ASIA Ltd primarily offers credit insurance to infrastructure projects of developing countries. As shown in Table 4.1, ASIA Ltd is given BBB rating by Fitch in 2003. This rating belongs to investment grade.

If many top-rated, regional and domestic credit insurers are present, the reinsurance market will spontaneously develop. For instance, domestic insurers can insure a debt obligator for its gaining credit insurance by a top-rated insurer; a top-rated insurer can reduce its risk by selling its stake in an insurance contract to regional and domestic insurers. An active market of credit insurance and credit reinsurance tends to result in rapid growth in credit derivatives and insurance-linked securities. These instruments provide effective tools for credit insurers and banks to effectively diversify and hedge their credit risk. With more tools to hedge credit risk, international investors, top-rated insurers and top-rated financial institutions will be more willing to take their stakes in the Asian credit market.

5. Asset Securitization and ABS Corporations

Asset securitization is to pool many small assets into a trust (or a special-purpose company). Then trust units, in the form of asset-backed securities (ABS), are then sold to many investors. Asset securitization is frequently applied to debts, such as residential mortgage loans, commercial mortgage loans, credit-card loans, high yield bonds, leasing revenue, credit derivatives (or credit insurance), non-performing loan and others. It also deals with real estates, rent income, air fare revenue, telephone services revenue and others.

Securitized debts have the following advantages to investors. First, investors can easily invest in a well-diversified portfolio composed of many debts. Second, securitized debts are mostly insured through a pool insurance policy, in which an insurer bears the credit risk of the debts in the portfolio. Because of risk diversification and credit insurance policy attached, securitized debts mostly gain credit ratings at investment grade.

Asian securitization developed very slowly in the past several years. Table 5.1 displays some securitization deals in Asia in 2000-2001. Relatively, Korea is more active in asset securitization. In 1998, Korea enacted a package of laws, known as Securitization Act, to provide a simple and effective legal framework for asset securitization. Such a legal reform in Korea aims to facilitate the securitization of non-performing loans of banks and to restructure the balance sheet of nearly insolvent corporations.

Table 5.2 Asian Securitization

Issue Date	Region/Country	Originator/Issuer	Underlying Assset
April-01	Hong Kong	Commercial Plaza Sec Ltd	Commercial Properties
April-01	Korea	Credit Creator Ltd	Auto Loans
February-01	Korea	HAN LSP (KDB) Plc	Credit Derivatives
January-01	Korea	OZ Receivables	Air-fare Revenues
December-00	Hong Kong	HK Synthetic MBS Co Ltd	Commercial Properties
September-00	Singapore	Pioneer Export Funding Ltd	Trading Assets
October-00	Hong Kong	Commercial Plaza Sec Ltd	Commercial Properties
August-00	Multiple	United Asian CBO 1 Ltd	Loans and Bonds
August-00	Korea	HAN LSP (KDB) Plc	Credit Derivatives
August-00	Korea	Korea Asset Funding Corporation	Loans and Bonds
April-00	Korea	Sogeko Funding Corporation	Equipment Lease Assets
April-00	Korea	KDBC Leasing Receivables 1 Plc	Equipment Lease Assets

Source: Ikeya (2001), Rating and Investment Information Inc, Japan

Securitization of Asian Corporate Bonds

To transform Asian corporate bonds to be investment-grade assets, one simple way is to pool them to become securitized corporate bonds. In the US, collateralized debt obligation (CDO), which is a form of securitized debt, grew very fast after the mid-1990s. CDO can include collateralized loan obligation (CLO) and collateralized bond obligation (CBO)[6]. Both of them are insured by pool insurance policies. CBOs are securities backed by a pool of high yield bonds. They satisfy the market demand for high-yield assets with credit protection. CLOs are securities backed by a pool of bank loans. Issuance of CLOs enables commercial banks to put their assets off their balance sheet and thus to reduce their regulatory capital requirements.

Issuance of Asian CBOs can drastically increase the supply of investment-grade debt securities in Asia. They are safe assets because top-rated, regional and domestic credit insurers insure the cash flows from the bonds. A large asset pool of CBOs can be listed and traded on the exchange or in the OTC market. In 2000, Korea introduced the Primary CBO Guarantee Program via the Korea Credit Guarantee Fund. This CBO program fills the credit quality gap between bond issuers and bond investors. Securitizing Asian corporate bonds benefit many parties, namely the Asian corporations that issue the bonds, the originators that structure the CBOs, the insurers that offer the credit insurance, and the countries that obtain capital inflows.

Establishment of ABS Corporations

Who should be an originator of CBOs? Currently international market players are reluctant to take proactive role in Asian securitization because of unclear regulations

[6] Details about high yield bonds and CBOs can be found in Barnhill, Maxwell and Shenkman (1998) and Goodman and Fabozzi (2002).

that protect their interests. Asian Banker Association (ABA 2003) has made a number of suggestions on promoting asset securitization in Asia, such as standardization of contracts, development of secondary markets, development of the market for credit default swaps, strengthening of mortgage origination, underwriting and servicing standards, and others. The primary role of governments is to do something that the market is not interested in and to facilitate the growth of market forces in the long run. Asian governments can take a lead to coordinate the development of the ABS market. The Primary CBO Guarantee Program in Korea is a good example of governmental efforts on asset securitization. The Mortgage Corporation in Hong Kong is another example for this purpose. This institution is a subsidiary of the Hong Kong Monetary Authority, dealing with mortgage securitization. It totally operates on self-financing basis. Following the concepts of the above practices, Asian governments should set up government-sponsored ABS corporations to deal with bond and loan securitization. In the USA, most residential mortgage loans are securitized through government-sponsored mortgage corporations, while other debt obligations, such as commercial mortgages, credit card receivables and others, are securitized via financial institutions. The ABS corporations can deal with asset pools in the whole Asian region or in individual Asian countries. They aim to coordinate and facilitate the securitization process. For instance, they can recommend changes in legal framework for asset securitization, can establish standardized procedures to acquire sovereign debts, corporate bonds and other assets into their asset pools, to arrange pool insurance contracts with recognized credit insurers and to distribute the ABS through investment banks and commercial banks. Meanwhile, they can strategically originate ABS of different risk profiles, such as country-based CBOs, industry-based CBOs, MBS, Asian sovereign ABS and other ABS, to meet with diverse needs of domestic and international investors. One additional advantage of securitization is that it can easily transform a pool of domestic securities to become international securities when currency swaps are included in the asset pools.

The ABS corporations play the role of advisers and intermediaries. Their establishment can accelerate the growth of investment-grade debt securities in Asia. These assets will retain the Asian wealth, such as individual savings, pension funds and provident funds[7]. Also, it helps bring in international capitals to the Asian market.

6. Investor Base and Asian Bond Funds

Investor base is another issue for Asian sovereign and corporate bonds. A successful bond market needs to have diverse investor base to diversify sources of funding. Currently investor base for Asian sovereign and corporate bonds is very narrow. The US Treasury Securities market is a successful market because it attracts a wide range of investors.

Table 6.1 displays the distribution of investors in the US Treasury securities. In recent years, international investors in the US treasury securities market have grown to around 35%. Domestic institutional investors, including pension funds, mutual funds,

[7] The central provident fund in Singapore invests mainly in Singapore Government Securities but the government does not need to borrow money. Such a phenomenon leads to dead weight loss in the interest rate market (Ng 2000) because the provident fund is the principle investor in the government securities and the securities do not need to offer competitive interest rate to the provident fund. A similar situation also occurs in Hong Kong. Mandatory provident funds in Hong Kong invest heavily in the Exchange Fund Bills and Notes, while the Hong Kong SAR government does not need to issue debts. These provident funds in Asia can easily drive the growth of insured corporate bonds or securitized corporate debts if there are mechanisms to facilitate their presence in Asia.

banks and insurance companies, remain to be dominant in the market of treasury securities. The percentage of individual investors remains unchanged for the past 20 years, staying at around 12%. The credit enhancement mechanisms, namely credit insurance and asset securitization, should be able to increase the participation of institutional investors and international investors in Asian debts. Meanwhile, Asian governments should explore how to facilitate individual investors to participate in the Asian bond market. One simple way is to develop bonds of smaller par value for the general public to invest[8]. Another way is to promote mutual funds that invest primarily in Asian corporate bonds. It facilitates the general public to invest in a well-diversified portfolio of Asian corporate debts[9]. In May 2003, nine Asian governments agreed to set up an Asian bond fund, namely Thailand, China, Japan, Hong Kong SAR, South Korea, Singapore, Indonesia, Malaysia and Philippines. Each of the governments contributes up to 1% of its foreign reserve to the fund. The fund will invest in Asian debt securities.

To enable the further participation of individual investors, this governmental bond fund can be further securitized to become a close-end or open-ended fund. The securitized Asian bond fund can be sold to the general public in Asia and global institutional investors. Assets in the bond fund should be insured bonds and loans because it minimizes the credit risk of individual investors. Such a securitized Asian bond fund can drastically enlarge the investor base for Asian debt securities. Also, it

[8] The Hong Kong Monetary Authority issues Exchange Fund Bills and Notes that are like treasury securities in the US. Their investors are mainly institutional investors. In 2000, it began to issue Exchange Fund Notes of smaller size (around US$7,000 per contract) to the general public. Such an arrangement helps enlarge the investor base of government bonds.

[9] In 1997, the Hong Kong government intervened the equity market in order to counterbalance the attacks of global hedge funds. The equities purchased at that time were securitized to become a fund known as Tracker Fund. All the units of the fund were later sold to both institutional and individual investors. Asian governments can take an proactive role in asset securitization that can transform sovereign and corporate debts to suit the investment needs of the general public.

can become an actively traded asset in the market due to its large market capitalization and large number of individual and institutional investors. The liquid bond fund may nurture relevant financial derivatives that help international investors and credit insurers to hedge their credit and market risk in Asia.

7. Summary and Conclusions

Asian governments have made remarkable improvements in government bond issuances for the past several years. However, very little progress of disintermediation is observed in the region. It is because corporate bonds remain underdeveloped in Asia. The key issue of Asian corporate bond market is its lack of credit ratings at investment grade. Without the status of investment grade, Asian corporate bond cannot easily gain access to international and domestic institutional investors. This will result in slow growth of the market of Asian corporate bonds. Three key institutional foundations are crucial to accelerate the growth of the Asian corporate bonds, namely credit insurance, securitization and Asian bond funds. The first two foundations can transform Asian corporate bonds to be investment-grade assets and the last one can enlarge the investor base of the corporate bonds.

Table 6.1 Ownership of US Treasury Securities 1982-2002

Year	Total Holdings ($bln)	Individuals	Mutual Fund / Trusts	Banking Institutions	Insurance Companies	US Monetary Authorities	State and local Govts	Foreign & Int'l	Pension Fund	Others
1982	886.1	11.40%	7.30%	18.20%	3.50%	15.30%	11.60%	17.00%	12.70%	3.10%
1983	1,056.70	13.40%	4.40%	20.20%	4.40%	14.30%	10.80%	15.50%	13.50%	3.60%
1984	1,244.80	14.40%	4.80%	19.00%	5.20%	12.80%	10.00%	16.10%	14.20%	3.60%
1985	1,444.30	11.90%	7.00%	15.70%	5.60%	12.30%	13.60%	15.70%	14.60%	3.70%
1986	1,606.40	9.00%	9.30%	15.40%	6.30%	12.30%	13.30%	16.80%	13.40%	4.20%
1987	1,714.50	10.20%	8.70%	13.80%	6.30%	13.00%	13.30%	17.30%	13.80%	3.70%
1988	1,825.20	14.10%	8.20%	10.30%	6.50%	12.80%	11.90%	19.40%	13.30%	3.50%
1989	1,950.50	12.50%	8.20%	11.60%	6.40%	11.60%	10.80%	21.70%	13.30%	3.90%
1990	2,178.40	15.40%	9.30%	9.80%	6.30%	10.80%	11.40%	20.10%	12.90%	3.90%
1991	2,461.60	14.00%	10.70%	11.30%	7.40%	10.80%	11.30%	19.30%	11.40%	3.90%
1992	2,746.50	14.30%	10.90%	12.40%	7.20%	10.70%	9.50%	18.90%	11.20%	4.80%
1993	2,988.50	13.80%	11.20%	11.50%	7.80%	11.10%	10.00%	19.90%	10.80%	3.80%
1994	3,148.20	19.10%	9.90%	9.40%	7.60%	11.60%	7.40%	20.10%	11.10%	3.70%
1995	3,310.30	16.60%	9.80%	10.10%	7.30%	11.40%	5.30%	25.40%	10.10%	3.90%
1996	3,472.60	19.70%	7.30%	8.20%	6.20%	11.30%	4.60%	30.20%	9.90%	2.70%
1997	3,467.90	16.80%	7.30%	8.50%	5.10%	12.40%	3.70%	33.50%	10.40%	2.40%
1998	3,372.70	16.30%	8.00%	7.50%	4.20%	13.40%	3.10%	35.10%	9.80%	2.60%
1999	3,298.20	19.90%	7.50%	6.20%	3.70%	14.50%	3.00%	32.80%	9.70%	2.70%
2000	3,019.50	14.90%	7.90%	6.60%	3.60%	16.90%	2.70%	34.00%	10.10%	3.30%
2001	3,016.20	12.40%	8.90%	6.30%	3.50%	18.30%	3.70%	34.50%	9.30%	3.10%
2002*	3,218.40	12.00%	9.00%	6.90%	3.60%	19.60%	2.50%	35.40%	8.80%	2.20%

Source: Bond Market Association in the US (2003)
** Estmates of Bond Market Association*

Credit insurance and asset securitization have been hot issues among Asian countries for the past two years. However, as highlighted by Shin (2003), a vice president of the Asian Development Bank, the market of securitization and credit insurance remain underdeveloped in Asia despite many discussions. To attract the presence of top-rated credit insurers in Asia, Asian governments should grow regional and domestic credit insurers. These credit insurers will nurture the development of a reinsurance market and enable the growth of credit derivatives and insurance-linked securities. With more tools to hedge effectively credit risk in Asia, international investors, top-rated credit insurers and top-rated financial institutions will find it safer to take their stakes in the Asian credit market.

Asset securitization is another way to transform Asian corporate bonds to be investment-grade assets. ABS Corporations, which are government-sponsored organizations, should be established to facilitate asset securitization. These ABS Corporations can standardize the contracts or procedures for acquiring assets into asset pools, for soliciting credit insurance contracts and for distributing ABS. One success factor of Eurobonds, MTNs and ABS in Europe and the US is their standardized contracts or standardized procedures for securities issuance. A standardized contract, procedure and legal document[10], which have obtained wide consultation, can tremendously reduce transaction costs and increase investors' confidence.

[10] In case if insolvency, enforceability of financial contracts is subject to the jurisdictions concerned. Cross-border insolvency arrangements can be complicated and increase legal uncertainty even in advanced economies (BIS 2002). In Asia, insolvency arrangements and contract enforceability are very uncertain in some developing countries because of very few proceedings available. If international insurers provide guarantees on those corporate bonds from emerging economies, it will offer better comfort to international investors than relevant laws enacted in the emerging economies.

Investor base is another important concern of the development of Asian corporate bonds. An Asian bond fund, supported by Asian governments, will no doubt strengthen the demand for Asian corporate bonds. But it will not widen investor base in the long run. A desirable strategy is to securitize the government-based bond fund to be a mutual fund sold to individual and institutional investors. The fund primarily invests in insured debt securities. This makes its investors bear very little credit risk.

In the era of globalization, an Asian bond market needs to suit the needs of international and domestic investors. All these investors are rational and are able to make global comparisons in their investment. Asian governments need to ensure the supply of investment-grade assets if they want to grow their bond markets. Credit enhancement is an immediate and effective solution for this goal.

Reference

ABA (2003) “Promoting the Development of Securitization and Credit Guarantee,” Position Paper of Asian Bankers Association (March 2003).

ADB (1999) Compendium of Sound Practices Guidelines to Facilitate the Development of Domestic Bond Markets in APEC Member Countries. Asian Development Bank.

Asian Wall Street Journal (Mar 3, 2003) “Japan Proposes Regional Market For Asian Bonds.”

Barnhill, Maxwell and Shenkman (1998) High-Yield Bonds: Market Structure, Portfolio Management and Credit Risk Modeling. McGraw-Hill.

BIS(2002) Insolvency Arrangements and Contract Enforceability (A report of the contact group on the legal and institutional underpinnings of the international financial system). Bank for International Settlements, December.

Border and Sarkar (1996) “Securitizing Property Catastrophe Risk,” Current Issues, Federal Reserve Bank of New York, August.

Cander, Cole and Sandor (1997) “Insurance Derivatives: A New Asset Class for the Capital Markets and a New Hedging Tool for the Insurance Industry,” Journal of Applied Corporate Finance 10, 68-83

Goodman and Fabozzi (2002). Collateralized Debt Obligations: Structures and Analysis. John Wiley & Sons.

Ikeya, Makoto (2001) “Securitization Market in Asia (excluding Japan) Stalls: Public Commitment and Initiatives to be tested,” R&I Asia Focus (September 2001). Ratings and Investment Information Inc, Japan.

Latza (1997) “Risk Securitization Growth Expected,” National Underwriter, July 14.

Oh, Gyutaeg (2003) “Fostering Asian Bond Markets using Securitization and Credit Guarantee,” Paper presented at the seminar of Ministry of Finance, Japan (1 March 2003).

McGreehan (1998) “Investment Bankers are Moving Fast to Offer Securities Backed by Pools of Insurance Policies,” Wall Street Journal, June 15.

Ng, Edward (2000) “Central Provident Fund in Singapore: A Capital Market Boost or a Drag?” Rising to the Challenge in Asia: A Study of Financial Markets: Volume 3 - Sound Practices. Asian Development Bank

Shin, Myoung-Ho (2003) “Development of Securitization and Credit Guarantee

Markets for Bond Market Development," Keynote address at the APEC High Level Policy Dialogue (3 April 2003), Korea.

World Bank/IMF (2001) Developing Government Bond Markets: A Handbook. The World Bank and International Monetary Fund.